

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group
Art Unit: Unknown

Attorney
Docket No.: SHC0162

Applicant: Yoshitaka Mishima

Invention: DISPOSABLE UNDERGARMENT

Serial No: Unknown

Filed: Herewith

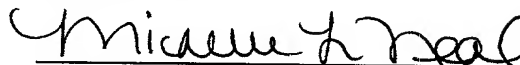
Examiner: Unknown

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on DECEMBER 6, 2001


Michelle L. Neal

PRELIMINARY AMENDMENT

Box: Patent Application
Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Prior to the examination of the above-identified application, please amend the application
as follows:

IN THE HEADINGS

Please change the heading on page 6 from "DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENTS" to - -DETAILED DESCRIPTION OF THE INVENTION-- -

IN THE SPECIFICATION

Please replace the first full paragraph on page 4 with the following:

- -According to one embodiment of this invention, the skin-contactable sheets actually
comprise a pair of belt-like strips spaced from and opposed to each other in the transverse
direction and respectively extending along the transversely opposite side edge portions of the
undergarment in the longitudinal direction so that the skin-contactable surface inclusive of the
panel may be partially surfaced between these skin-contactable sheets.- -

Please replace the last paragraph beginning on page 4 and continuing on page 5 with the following:

- -According to another embodiment of this invention, the undergarment further comprises a pair of substantially liquid-impervious leak-barrier cuffs spaced apart from and opposed to each other in the transverse direction and respectively extending along the transversely opposite side edge portions of the undergarment, the leak-barrier cuffs being disposed between the base sheet and the skin-contactable sheets and attached under extension in the longitudinal direction to the skin-contacting surface of the undergarment, the leak-barrier cuffs having fixed side edge portions secured to the transversely opposite side edge portions of the undergarment and extending in the longitudinal direction, free side edge portions being stretchable in the longitudinal direction and normally biased to rise on the skin-contactable surface and longitudinally opposite fixed end portions collapsed onto the skin-contactable surface and fixed to the longitudinally opposite end portions of the undergarment in such collapsed state so that the free surface area of the skin-contactable sheet is kept spaced upward from the free side edge portions of the leak-barrier cuffs.- -

Please replace the first full paragraph on page 5 with the following:

- -According to still another embodiment of this invention, the skin-contactable sheet is made of an elastically stretchable fibrous nonwoven fabric.- -

Please replace the second full paragraph on page 5 with the following:

- -According to further another embodiment of this invention, the skin-contactable sheet is made of a non-stretchable fibrous nonwoven fabric and elastically stretchable members are attached under extension in the longitudinal direction to the non-stretchable fibrous fabric so that the skin-contactable sheet may have stretchability in the longitudinal direction.- -

Please replace the second paragraph beginning on page 17 and continuing on page 18 as follows:

- -The skin-contactable sheets 5 in Fig. 1 may be formed an elastically stretchable hydrophobic fibrous nonwoven fabric obtained by the melt blown or spun bond process. Component fiber of such elastic stretchable nonwoven fabric may be stretchable fibers may be stretchable fibers obtained by melting and spinning thermoplastic elastomer resin. The elastically stretchable fibrous nonwoven fabric may be a composite nonwoven fabric consisting of a hydrophobic fibrous nonwoven fabric made of thermoplastic elastomer resin fiber and a hydrophobic fibrous nonwoven fabric comprising crimped fiber which is obtained by melting and spinning thermoplastic synthetic resin such as polypropylene, polyethylene or polyester bonded to at least one surface of the hydrophobic fibrous nonwoven fabric.- -

IN THE CLAIMS

Please amend Claim 1 as follows:

1. (Amended) A disposable undergarment comprising:

a skin-contactable surface;

a non skin-contactable surface opposed to said skin-contactable surface;

a liquid-impervious base sheet contoured by longitudinally opposite end portions extending in a transverse direction and transversely opposite side edge portions extending in a longitudinal direction;

a liquid-absorbent panel attached to said base sheet and lying on said skin-contactable surface; and

skin-contacting sheets attached under extension in said longitudinal direction to said skin-contactable surface of said undergarment so as to cover said liquid-absorbent panel, said skin-contactable sheets being stretchable in said longitudinal direction and substantially liquid-impervious, said skin-contactable sheets having fixed surface areas secured to said longitudinally

opposite end portions and free surface areas extending between said fixed surface areas, which free surface areas are not fixed to said undergarment so as to be spaced upward from said liquid-absorbent panel as said undergarment curves in said longitudinal direction with its skin-contactable surface inside,

said skin-contactable surface of said undergarment being provided with regions in which said skin-contactable sheets are absent so that said skin-contactable surface inclusive of said liquid-absorbent panel is partially exposed in said regions in which said skin-contactable sheets are absent.

Please amend Claim 2 as follows:

2. (Amended) The disposable undergarment according to Claim 1, wherein said skin-contactable sheets comprise a pair of belt-shaped strips spaced apart from and opposed to each other in said transverse direction and respectively extending along said transversely opposite side edge portions of said undergarment in said longitudinal direction so that said skin-contactable surface inclusive of said liquid-absorbent panel is partially exposed between the skin-contactable sheets.

Please amend Claim 3 as follows:

3. (Amended) The disposable undergarment according to Claim 1, further comprising a pair of substantially liquid-impervious leak-barrier cuffs spaced apart from and opposed to each other in said transverse direction and respectively extending along said transversely opposite side edge portions of said undergarment, said leak-barrier cuffs being disposed between said base sheet and said skin-contactable sheets and attached under extension in said longitudinal direction to said skin-contactable surface of said undergarment, said leak-barrier cuffs having fixed side edge portions secured to said transversely opposite side edge portions of said undergarment and extending in said longitudinal direction, free side edge portions being stretchable in said

longitudinal direction and normally biased to rise on said skin-contactable surface and longitudinally opposite fixed end portions collapsed onto said skin-contactable surface and fixed to said longitudinally opposite end portions of said undergarment in such collapsed state so that said free surface areas of said skin-contactable sheets are spaced upward from said free side edge portions of said leak-barrier cuffs.

Please amend Claim 4 as follows:

4. (Amended) The disposal undergarment according to Claim 1, wherein said skin-contactable sheets comprise an elastically stretchable fibrous nonwoven fabric.

Please amend Claim 5 as follows:

5. (Amended) The disposal undergarment according to Claim 1, wherein said skin-contactable sheets comprise a non-stretchable fibrous nonwoven fabric and elastically stretchable members are attached under tension in said longitudinal direction to said non-stretchable fibrous fabric so that said skin-contactable sheets have a stretchability in said longitudinal direction.

IN THE ABSTRACT

Please amend the Abstract as follows:

- -A disposable undergarment that includes liquid-impervious skin-contactable sheets actually having a pair of belt-like strips spaced apart from and opposed to each other in a transverse direction of an undergarment and extending in a longitudinal direction of the undergarment along transversely opposite side edge portions of the undergarment. The skin-contactable sheets are attached to a skin-contactable surface 1a of the undergarment so as to cover a panel. The skin-contactable sheets have fixed surface areas secured to longitudinally opposite end portions 1c of the undergarment and free surface areas adapted to be spaced upward from the panel so that the skin-contactable surface may be partially surfaced between these skin-

contactable sheets.- -

• • • R E M A R K S • • •

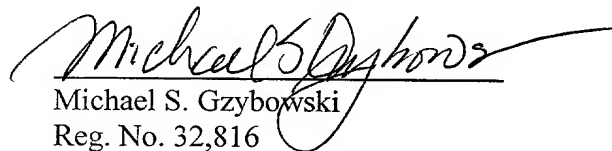
By the present Preliminary Amendment, the specification, claims and abstract have been revised to more clearly describe applicants' invention in accordance with the requirements of 35 U.S.C. § 112.

Care has been taken so as to avoid the addition of new matter in the specification, claims and abstract.

Entry of the present Preliminary Amendment prior to the examination of the application is respectfully requested.

In the event applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, applicants hereby petition therefor and authorize that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

Respectfully submitted,


Michael S. Gzybowski
Reg. No. 32,816

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Changes Made to Specification Paragraphs

The first full paragraph on page 4 has been amended as follows:

According to one [preferred] embodiment of this invention, the skin-contactable sheets actually comprise a pair of belt-like strips spaced from and opposed to each other in the transverse direction and respectively extending along the transversely opposite side edge portions of the undergarment in the longitudinal direction so that the skin-contactable surface inclusive of the panel may be partially surfaced between these skin-contactable sheets.

The last paragraph beginning on page 4 and continuing on page 5 has been amended as follows:

According to another [preferred] embodiment of this invention, the undergarment further comprises a pair of substantially liquid-impervious leak-barrier cuffs spaced apart from and opposed to each other in the transverse direction and respectively extending along the transversely opposite side edge portions of the undergarment, the leak-barrier cuffs being disposed between the base sheet and the skin-contactable sheets and attached under extension in the longitudinal direction to the skin-contacting surface of the undergarment, the leak-barrier cuffs having fixed side edge portions secured to the transversely opposite side edge portions of the undergarment and extending in the longitudinal direction, free side edge portions being stretchable in the longitudinal direction and normally biased to rise on the skin-contactable surface and longitudinally opposite fixed end portions collapsed onto the skin-contactable surface and fixed to the longitudinally opposite end portions of the undergarment in such collapsed state so that the free surface area of the skin-contactable sheet is kept spaced upward from the free side edge portions of the leak-barrier cuffs.

The first full paragraph on page 5 has been amended as follows:

According to still another [preferred] embodiment of this invention, the skin-contactable sheet is made of an elastically stretchable fibrous nonwoven fabric.

The second full paragraph on page 5 has been amended as follows:

According to further another [preferred] embodiment of this invention, the skin-contactable sheet is made of a non-stretchable fibrous nonwoven fabric and elastically stretchable members are attached under extension in the longitudinal direction to the non-stretchable fibrous fabric so that the skin-contactable sheet may have stretchability in the longitudinal direction.

The second paragraph beginning on page 17 and continuing on page 18 has been amended as follows:

The skin-contactable sheets 5 in Fig. 1 may be formed [using] an elastically stretchable hydrophobic fibrous nonwoven fabric obtained by the melt blown or spun bond process. Component fiber of such elastic stretchable nonwoven fabric may be stretchable fibers may be stretchable fibers obtained by melting and spinning thermoplastic elastomer resin. The elastically stretchable fibrous nonwoven fabric may be a composite nonwoven fabric consisting of a hydrophobic fibrous nonwoven fabric made of thermoplastic elastomer resin fiber and a hydrophobic fibrous nonwoven fabric comprising crimped fiber which is obtained by melting and spinning thermoplastic synthetic resin such as polypropylene, polyethylene or polyester bonded to at least one surface of the hydrophobic fibrous nonwoven fabric.

Changes Made to Claims

Claim 1 has been amended as follows:

1. (Amended) A disposable undergarment comprising:
a skin-contactable surface;

a non skin-contactable surface opposed to said skin-contactable surface;

a liquid-impervious base sheet contoured by longitudinally opposite end portions extending in a transverse direction and transversely opposite side edge portions extending in a longitudinal [direction,] direction; [and]

a liquid-absorbent panel attached to said base sheet [wherein said undergarment has a] and lying on said skin-contactable surface; and [on which said panel lies and a non skin-contactable surface opposed to said skin-contactable surface, wherein:]

skin-contacting sheets [is stretchable in said longitudinal direction and substantially liquid-impervious are] attached under extension in said longitudinal direction to said skin-contactable surface of said undergarment so as to cover said liquid-absorbent panel, said skin-contactable sheets being stretchable in said longitudinal direction and substantially liquid-impervious, said skin-contactable sheets having fixed surface areas secured to said longitudinally opposite end [portions, respectively,] portions and free surface areas extending between [respective pairs of] said fixed surface areas, [and] which free surface areas are not fixed to said undergarment so as to be spaced upward from said liquid-absorbent panel as said [article] undergarment curves in said longitudinal direction with its skin-contactable surface inside, [wherein]

said skin-contactable surface of said undergarment [is] being provided with regions in which said skin-contactable sheets are absent so that said skin-contactable surface inclusive of said liquid-absorbent panel is partially [surfaced] exposed in said [regions.] regions in which said skin-contactable sheets are absent.

Claim 2 has been amended as follows:

2. (Amended) The disposable undergarment according to Claim 1, wherein said skin-contactable sheets [actually] comprise a pair of [belt-like] belt-shaped strips spaced apart from and opposed to each other in said transverse direction and respectively extending along said

transversely opposite side edge portions of said undergarment in said longitudinal direction so that said skin-contactable surface inclusive of said liquid-absorbent panel is partially [surfaced] exposed between [these] the skin-contactable sheets.

Claim 3 has been amended as follows:

3. (Amended) The disposable undergarment according to Claim 1, further comprising a pair of substantially liquid-impervious leak-barrier cuffs spaced apart from and opposed to each other in said transverse direction and respectively extending along said transversely opposite side edge portions of said undergarment, said leak-barrier cuffs being disposed between said base sheet and said skin-contactable sheets and attached under extension in said longitudinal direction to said skin-contactable surface of said [article,] undergarment, said leak-barrier cuffs having fixed side edge portions secured to said transversely opposite side edge portions of said undergarment and extending in said longitudinal direction, free side edge portions being stretchable in said longitudinal direction and normally biased to rise on said skin-contactable surface and longitudinally opposite fixed end portions collapsed onto said skin-contactable surface and fixed to said longitudinally opposite end portions of said undergarment in such collapsed state so that said free surface areas of said skin-contactable sheets [may be kept] are spaced upward from said free side edge portions of said leak-barrier cuffs.

Claim 4 has been amended as follows:

4. (Amended) The disposal undergarment according to Claim 1, wherein said skin-contactable sheets [are made of] comprise an elastically stretchable fibrous nonwoven fabric.

Claim 5 has been amended as follows:

5. (Amended) The disposal undergarment according to Claim 1, wherein said skin-contactable sheets [are made of] comprise a non-stretchable fibrous nonwoven fabric and

elastically stretchable members are attached under [extension] tension in said longitudinal direction to said non-stretchable fibrous fabric so that said skin-contactable sheets [may] have a stretchability in said longitudinal direction.

Changes in the Abstract

The Abstract has been amended as follows:

A disposable undergarment that includes liquid-impervious skin-contactable sheets actually having a pair of belt-like strips spaced apart from and opposed to each other in a transverse direction of an undergarment and extending in a longitudinal direction of the undergarment along transversely opposite side edge portions of the undergarment. The skin-contactable sheets are attached to a skin-contactable surface 1a of the undergarment so as to cover a panel. The skin-contactable sheets have fixed surface areas secured to longitudinally opposite end portions 1c of the undergarment and free surface areas adapted to be spaced upward from the panel so that the skin-contactable surface may be partially surfaced between these skin-contactable sheets.